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TITLE I PROGRESS REPORT

E7.4-10.0.56.
CR-135897

Title: Recognition of the Geologic Framework of Porphyry Copper Deposits
on ERTS-1 Imagery

Principal Investigator: John C. Wilson, PR 510

Contract: NAS5-21769

Objective:

The purpose of the investigation is to examine the general hypothesis that mineral deposits of the copper/molybdenum porphyry type occur in a characteristic geologic setting which is recognizable in the surface data on space acquired imagery.

Summary of Accomplishments - September and October 1973:

EarthSat personnel met with Kennecott Exploration Inc. personnel in Salt Lake City for evaluation of their 'naive' interpretation of the test sites. The following subjects were also covered in this meeting:

- 1) Fourier analysis of fault trends from the Arizona test site to detect spacing between faults that would be an indication of crustal thickness
- 2) Assignment of tectonic units to test sites based upon observed data from ERTS imagery
- 3) Circular features observed on the imagery, their related importance and probable causes
- 4) An ERTS stream drainage interpretation of the Ok Tedi, Papua test site was compared with a similar interpretation from SLAR imagery
- 5) The remaining tasks left to complete the investigation were discussed.

Redrafted copies of the interpretation performed by EarthSat will have additional information added to them by the Kennecott coinvestigators.

The rough draft of EarthSat's final report is now being written and will be reviewed by the Kennecott personnel in the near future.

Problems:

Variable image quality is decreasing. Occasional shipments of imagery for other investigators is being received and shipped on.

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Salt Lake City)
Oct. 1973 (Kennecott Exploration, Inc.,
ERTS-1 Imagery Progress Report, Sep. -
FRAMEWORK OF PORPHYRY COPPER DEPOSITS ON
RECOGNITION OF THE GEOLOGIC
N/A 111177

Data Request Forms:

None

Plans for Next Reporting Period:

Continue interpretations of imagery on selected test sites. Planning for completion of investigation.